In the event of a rapid population growth coupled with rising impacts of climate change on agricultural productivity and the environment, food insecurity remains a major threat to the African continent, most especially rural areas with higher vulnerability. In Tanzania, food insecurity is more intense in rural areas; especially in the semi arid region of Dodoma, which experiences rainfall limitation and has endured food shortages over the last decades.

In response, there is a dire need to develop counter strategies to increase household food supply beyond food demand without compromising the use of resources. Amongst various strategies in preventing and mitigating severe food insecurity are kitchen gardens, with a proven track record of yielding significant nutritional, environmental and economic benefits. This study was intended to analyse the potential of Kitchen Gardens in mitigating food insecurity and its associated risks over time; with experiences acquired from some 30 households living and implementing kitchen garden practices in Ilolo, a village in the semi arid region, Dodoma.

Specifically, the study aims to examine the main rational for household’s utilization of kitchen gardens. An optimisation model was used to determine the maximum bundle of vegetable species cultivated within given resource constraints. It specifically investigates different options for stabilising household’s livelihoods from the implementation of kitchen gardens.

This study was carried out between the months of January till April which are usually characterised as lean periods. It employed both qualitative and quantitative techniques of data collection; facilitated by the use of questionnaires, interviews and observations.

Among others, focus group discussions were organised to capture the major obstacles and opportunities existing along different stages of the kitchen garden value chain.

Results obtained from this study indicated the strong potential of kitchen gardens in alleviating household food insecurity and an effective coping strategy in ensuring a steady supply of fresh vegetables even during lean seasons compared to alternative methods of obtaining vegetables. In addition, vegetable cultivation using pocket gardens was illustrated as a best agricultural practice requiring minimal water and land use, organic fertilisers in the form of manure.

Keywords: Food Insecurity, Kitchen Gardens, Resources, Vulnerability.